CONCEPT NOTE PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme: Skills for climate-resilient futures

Country: Montenegro

Thematic Focal Area: Education

Type of Implementing Entity: Multilateral Implementing Entity

Implementing Entity: The World Bank

Executing Entities: The Ministry of Education, Science and Innovation

Amount of Financing Requested: 15,000,000 (in U.S Dollars Equivalent)

Project Formulation Grant Request (available to NIEs only): Yes ☒ No ☐

Amount of Requested financing for PFG: USD 150,000

Letter of Endorsement (LOE) signed: Yes ☒ No ☐

NOTE: LOEs should be signed by the Designated Authority (DA). The signatory DA must be on file with the Adaptation Fund. To find the DA currently on file check this page: https://www.adaptation-fund.org/apply-funding/designated-authorities

Stage of Submission:

☐ This concept has been submitted before

☒ This is the first submission ever of the concept proposal

In case of a resubmission, please indicate the last submission date: Click or tap to enter a date.

Please note that concept note documents should not exceed 50 pages, including annexes.

Project/Programme Background and Context:

Provide brief information on the problem the proposed project/programme is aiming to solve. Outline the economic social, development and environmental context in which the project would operate.

Economic, social and development context

The Government of Montenegro is committed to achieving sustainable and inclusive economic growth on its path towards EU accession but remains vulnerable to external shocks. A small, coastal Western Balkan country with a population of c.620 000, Montenegro has made important progress towards its goal of EU accession by 2028 by focusing on fiscal consolidation, enhancing competitiveness, and improving the business environment (ERP, 2024), while balancing economic growth with environmental protection and social inclusion (NSSD, 2016). However, Montenegro's small, open economy, with a narrow base focused on tourism, energy, and services, makes it highly susceptible to external shocks and climate change. While classified as an upper-middle-income country, with per-capita GDP of US$10,093 in 2022, Montenegro continues to qualify for preferential IBRD lending terms due to structural economic challenges, including its fiscal position, susceptibility to shocks, and classification as a "small state" (CPF, 2025-2029). To achieve sustainable growth and align its income levels with those of EU countries, Montenegro needs to diversify its economy and boost productivity, with an emphasis on green initiatives.

Montenegro has made considerable strides in enhancing its living standards in recent years, but the risk of poverty and inequality continues to be high. The robust post-pandemic economic rebound was accompanied by significant gains in the labor market and high employment growth rates. Poverty rate in Montenegro declined significantly over the past decade, reaching a regional low of 15.2% in 2019. However, one in five people remain at risk for poverty, with the country's northern, primarily rural region facing a significantly higher risk than the national average. Although income inequality dropped by 5 percentage points between 2017 and 2022, Montenegro still exhibits the most unequal income distribution in the Western Balkans (CPF, 2025-2029).

Initial gender analysis

Montenegro has made good progress in empowering women, but inequalities persist. About 32% of entrepreneurs in the country are women, and women own about one quarter of the country's micro, small, and medium enterprises (MSMEs). Yet important gender disparities persist in science, technology, engineering, and mathematics education and digital skills. Women in the Roma and Egyptian community face significantly lower school enrollment, high adolescent fertility rates, and high unemployment. Although Montenegro's labor market gender gap is among the smallest in the Western Balkans, with the female employment rate at 49.6% in 2023 compared to

61.8% for men, women earn, on average, about 11.9% less than men, representing the second-highest raw wage gap in the Western Balkans, after Serbia. Gender gaps in employment rates are particularly high among individuals with a basic or intermediate education, whereas no discernible gap exists among those with a tertiary education. When employed, women are more likely to have a part-time job than men. These discrepancies point to the higher burden borne by women in household management and care activities, with 68% of women reporting that they spend at least one hour on housework every day compared to 10% of men, and 42.7% of women indicating they are heavily involved in caring for children, the elderly, and the disabled, compared to 23.8% of men (CPF, 2025-2029).

Environmental context

Montenegro is highly susceptible to climate shocks, which cause significant human and economic damage. Many regions within the country are highly susceptible to floods, earthquakes, landslides and droughts. (CCDR, 2024). Table 1 presents the hazards to which Montenegro is exposed, and their risk levels.

Table 1: Main climate hazards in Montenegro and their associated risk levels

Hazard	**Risk level**
River floods	High
Urban floods	High
Landslides	High
Wildfires	High
Extreme heat	Medium
Coastal floods	Medium
Earthquakes	Medium
Water scarcity	Medium

Source: World Bank and GFDRR (2023)

Annually, flooding impacts approximately 10,000 people and causes an average of US$90 million in damage. In 2010, Montenegro experienced its worst ever floods – impacting 30,000 hectares of agricultural land and causing economic losses equivalent to 1.4% of GDP (NAP, n.d.). Driven by increased asset exposure, Montenegro's flood risk—measured as average annual loss (AAL)—is expected to increase in all the three possible future scenarios (Representative Concentration Pathways, [RCP] 2.6, 4.5 and 8.5) shown in Table 2. In addition, 51% of the country's total area is at a high or very high risk of landslides.

Table 2: Montenegro flood risk assessment

Scenario	AAL (US$, million)	Loss Ratio (%)	Average Population Exposed
Baseline	72,096,165.79	0.28	4,526
RCP 2.6	94,348,187.51	0.27	3,721
RCP 4.5	79,995,602.75	0.23	3,156
RCP 8.5	78,878,144.91	0.22	3,160

Source: CCDR (2024)

Worryingly, climate change is exacerbating heat stressors, with droughts, wildfires, and heatwaves becoming increasingly disruptive. Montenegro is highly vulnerable to drought due to reduced summer rainfall and an increasing number of days with high daytime temperatures. The 2011 drought caused a severe hydrological deficit in the country's two largest agricultural regions—Zeta and Bjelopavlići—while the 2012 heatwave directly affected approximately 4,500 people. In 2017 and 2018, drought conditions ranged from moderate to extreme, significantly lowering water levels in the Morača and Zeta rivers as well as Lake Skadar. These reductions had cascading impacts on key sectors such as agriculture, fisheries, and electricity generation. Moreover, the extremely dry conditions intensified the risk and occurrence of forest fires, compounding the environmental and economic consequences. At present, 36.3% of Montenegro's forests, which cover 54% of the country, are classified as being at very high risk of wildfires. Between 2005 and 2015, more than 18,000 hectares of forest were damaged or destroyed by wildfires (CCDR, 2024). In 2019, weather-related impacts accounted for 82% of total expenditures in the transport and road infrastructure sector, while in 2022, drought conditions resulted in €100 million in losses in hydroelectric power generation.

Earthquakes affect around 9,000 people each year and result in an average of US$70 million in damage. While earthquakes are primarily geophysical in nature, their impacts are often compounded by climate-related hazards such as floods and landslides, which are increasing in frequency and severity. 60% of Montenegro's population lives in areas with a high likelihood of experiencing earthquakes of magnitude 8 or greater on the Richter scale (i.e. "great" earthquakes capable of causing widespread devastation including the collapse of buildings and infrastructure). Urban areas, particularly along the coast, face growing risks from sea-level rise, storm surges, and extreme heat.

Exposure to natural hazards in Montenegro is closely linked to, and often exacerbated by, existing socioeconomic vulnerabilities. The country's 25 municipalities (opštine) experience varying degrees of socioeconomic stress, which interact with and are compounded by climate-related shocks. One of the most pressing challenges is demographic decline. According to World Development Indicators (WDI), Montenegro has entered

a negative population growth trend over the past seven years, with the national population now nearing 2007 levels. Disaggregated data reveal that approximately 60% of municipalities have experienced population decline over the past two decades, with growth largely concentrated in Podgorica and its surrounding areas (Tuzi, Zeta) before plateauing and beginning to reverse. Municipalities facing demographic decline are often among the most geographically isolated, with market access estimated to be roughly half that of municipalities with stable or growing populations. These declining areas also tend to have higher exposure to natural hazards—on average, 10% greater exposure to both wildfires and landslides compared to growing municipalities. While floods are generally less widespread, Zeta municipality stands out with relatively high average flood exposure. Nevertheless, localized flood risks exist in nearly every municipality, underscoring the need for targeted, place-based resilience strategies (CCDR, 2024).

The impacts of climate hazards are often localized and shaped by factors such as urbanization, settlement patterns, and population growth. Unplanned urban development and land use have significantly increased the number of people and assets at risk from natural disasters. High-risk areas include the Skadar Lake region, the Bojana River basin, and the capital city, Podgorica—particularly due to its dense population. Although river valleys occupy relatively small geographic areas, they host some of the country's largest settlements, amplifying their vulnerability. The coastal region faces distinct challenges, including land loss, declining biodiversity, and beach erosion, all of which are linked to rising sea levels and increasing sea surface temperatures. Mean annual air temperatures in Montenegro range from 4.6°C in the mountainous Žabljak area to 15.8°C along the coast. In pursuit of economic development, widespread unregulated construction—especially in coastal zones—has further heightened exposure to both seismic activity and flood risks (CCDR, 2024).

Without investments in climate adaptation, natural hazards could reduce Montenegro's GDP by up to 7.9%, depending on the climate change scenario. Conversely, investing in adaptation measures would yield a "Triple Dividend of Resilience", encompassing three main benefits: (i) preventing losses, (ii) boosting economic potential, and (iii) enhancing social and environmental co-benefits. By implementing climate adaptation actions at the national level, it is possible to significantly reduce human and economic losses from climate disasters while promoting human capital development (CCDR, 2024), in line with Montenegro's commitments under the National Strategy for Sustainable Development of Montenegro by 2030, the Economic Reform Program 2024–2026 and the EU Green Agenda for Western Balkans.

Education context

Montenegro's education system reflects a lifelong approach, with opportunities for improvement across education levels. Montenegro's education system includes preschool education, primary, secondary and higher education, as well as adult education programs. As recently confirmed by the Education Sector Analysis, undertaken by UNICEF, the Ministry of Education, Science and Innovation (MoESI), and validated through stakeholder consultations, there are opportunities for improvement in the education system related to quality, access, equity and governance. The comprehensive Education Reform Strategy (2025-2035) defines clear objectives and activities for their implementation in all of the above mentioned areas.

Unequal access to education persists. While 96% of children in Montenegro are enrolled in primary education, significant disparities persist among marginalized groups, especially Roma children, who exhibit lower attendance in both primary and secondary schooling. In the school year 2022/2023, 88.5% of Roma students successfully completed the final year of primary school, and 58% of those progressed from primary to secondary school in the following year. In 2023/2024, 86.5% of Roma students finished primary school successfully, with 51% continuing on to secondary education the subsequent year.

There is ample space for improving foundational skills of students. The 2022 results of the OECD's Programme for International Student Assessment (PISA) indicate substantial issues with student performance; average scores in mathematics, reading, and science are considerably below OECD averages. Only 40% of students achieved at least Level 2 proficiency in mathematics, significantly lower than the OECD average of 69%. This marks a decline in performance since the 2018 PISA assessment, underscoring the critical need for targeted reforms and increased educational investment to enhance learning outcomes and ensure equitable access to quality education for all. Furthermore, students from socio-economically disadvantaged backgrounds fall behind compared to their peers, pointing to pressing equity concerns that demand efficient and specific interventions (Education Reform Strategy 2025-2035).

Despite considerable progress in integrating children with disabilities into mainstream education, challenges remain. While there has been a consistent increase in their enrollment in regular primary schools since 2009, substantial challenges persist regarding both physical access to schools and the quality of educational services offered to these children. Additionally, the enrollment of children with disabilities in preschools and those progressing into secondary education remain very low (Education Reform Strategy 2025-2035).

The Montenegrin education system has recently faced pressure due to a sudden influx of refugees, including those fleeing conflicts like the

war in Ukraine. This surge in student numbers strains resources, infrastructure, and teaching staff, resulting in overcrowded classrooms and restricted learning opportunities. The impact varies across regions, with some areas and classrooms experiencing particular difficulties. New barriers, such as cultural differences, also impede effective communication and integration for both students and educators. Furthermore, providing adequate support for the trauma and mental health needs of refugee children is challenging due to a lack of specialized services. Consequently, the Montenegrin education system is compelled to rapidly adjust to offer inclusive and high-quality education to all students, including migrants, refugees, stateless children, and those at risk of statelessness, to facilitate their successful integration and academic progress (Education Reform Strategy 2025-2035).

Teachers are pivotal for the education system's future growth, yet both their initial training and ongoing professional development require strengthening. This involves equipping educators with the expertise to integrate technology into classrooms, cultivate critical thinking, and implement inclusive practices for diverse learning requirements (Education Reform Strategy 2025-2035).

Although education funding has steadily risen in recent years, the majority of resources are still allocated to recurrent expenditures, particularly salaries. This budgetary allocation limits the capacity for reforms requiring additional investment, and reliance on donor funding compromises the long-term sustainability of changes. Furthermore, insufficient coordination among different sectors and institutions has been identified as a challenge, hindering program implementation and reducing reform effectiveness. Despite these issues, initiatives are in progress to secure further funding via international mechanisms designed to foster sustainable and transformative improvements (Education Reform Strategy 2025-2035).

In June 2025, MoESI launched the new Education Reform Strategy 2025-2035, designed to tackle these challenges through a comprehensive approach. The strategy, developed with support from UNICEF and the EU, focuses on enhancing the quality and accessibility of education for all, ensuring that children and youth gain lifelong, practical knowledge and skills. It also emphasizes supporting their overall wellbeing to help them continue their education and engage meaningfully in the workforce and society. As part of Goal 1 — "The education system provides quality, accessible, and equitable education that fosters the holistic development of all children and youth and is resilient to challenges and risks" — Measure 1.3.1. has been defined to support this goal. This measure foresees the development of a **national curriculum framework** aligned with EU policies and standards, currently being developed with support from UNICEF and EU, with expected adoption by June 2026. The framework will set out key competencies for lifelong learning, global citizenship, life and socio-emotional skills, **green skills, climate change**, and other essential issues relevant for the

development of subject curricula, including elective courses and cross-curricular topics.

Climate education context

Schools in Montenegro are not sufficiently equipped to respond to climate shocks. One of the early findings of a pilot phase of the School Infrastructure Assessment project, conducted by the Ministry of Education, Science and Innovation (MoESI), United Nations Office for Project Services (UNOPS), and UNICEF, is that schools in Montenegro are not sufficiently resilient to the impacts of climate change (Education Reform Strategy 2025-2035). Insufficient climate resilience of schools poses significant risks to the safety and well-being of students and staff, as well as the continuity of education during extreme weather events.

Across Montenegro's three regions, schools are exposed to varying, and at times multiple, types of climate risks. While a comprehensive analysis of the climate vulnerability of Montenegro's school infrastructure will be conducted during the development of the full project proposal (see more below), a preliminary assessment of climate-related risks across the school network is provided at this concept stage to serve as a foundation for further analysis. Montenegrin schools are unevenly distributed across the country. In total, there are 161 public primary schools and 58 public and public-private secondary schools. Of the 161 primary schools, 73 are located in the northern region, 60 in the central (including the capital, Podgorica), and 28 in the southern (coastal) region (skolskastatistika.edu.mt, 2025/26). Of the 58 secondary schools, 19 are located in the northern region, 26 in the central region, and 13 in the South (skolskastatistika.edu.mt, 2025). Such geographic distribution of schools results in distinct climate hazard profiles across regions:

- Northern schools (92 primary and secondary schools): Schools in the North are particularly vulnerable to urban floods, especially around the Plav, Andrijevica and Berane areas, where the hazard level associated with such floods is classified as high. Areas in the North are also more exposed to water scarcity, pointing to a higher risk of droughts. Wildfire risk is high, as in the rest of the country (GFDRR, 2021).
- Central/Podgorica schools (86 primary and secondary schools): Schools in the capital of Podgorica are highly vulnerable to river flooding and landslides. In addition, schools in Podgorica and nearby central areas such as Danilovgrad and Cetinje face high risks from landslides. These areas are also exposed to a moderate risk of extreme heat, with heatwaves becoming increasingly frequent and prolonged—intensified further by the urban heat island effect (Tellam, 2020). Wildfire risk is high, as in the rest of the country (GFDRR, 2021).
- Southern/coastal schools (41 primary and secondary schools): Schools in all coastal areas, with the exception of Ulcinj, face a high risk of landslides. In contrast, schools in the Ulcinj area are moderately exposed to both

coastal and river flooding. Another region in Montenegro vulnerable to coastal flooding is Bar, where schools also face such risks due to the area's proximity to the shoreline. Schools in most areas in the South are also exposed to a moderate risk of extreme heat. Wildfire risk is high, as in the rest of the country (GFDRR, 2021).

In addition to climate-related hazards, schools in Montenegro are also exposed to seismic risks, which, while not hydrometeorological in nature, pose a significant threat to the safety of students and staff as well as to the resilience of the educational infrastructure. Schools located in areas of elevated seismic risk include those in the coastal municipalities of Ulcinj, Bar, Budva and Tivat, which lie near the Adriatic fault line, as well as parts of the central region such as Podgorica, Danilovgrad and Cetinje (GFDRR, 2017).

Given the existing constraints within the education system, Montenegro cannot afford losing more school days because of climate change. While the specific impacts of climate change on education continuity in Montenegro have not yet been estimated, global evidence offers useful insights. Globally, climate-related school closures result in the loss of approximately 11 instructional days per year on average—equivalent to about 6% of the academic calendar (World Bank, 2024). Unless made up, such schooling losses are bound to translate into substantial learning deficits, often disproportionately affecting disadvantaged students. On average, the extent of schooling lost due to climate-related disruptions is higher in low-income countries and lower in high-income contexts. However, even the latter still lose around 2.4 days annually (World Bank, 2024). As an upper-middle-income country, Montenegro can reasonably expect to face learning losses of at least this magnitude—placing additional strain on an already limited instructional calendar. The country already has a comparatively low number of school days, which restricts students' exposure to learning and may contribute to weaker educational outcomes (UNICEF, 2022). Further compounding this issue are imbalances in the school network, whereby, as further detailed in Section A below, some schools in Montenegro experience severe overcrowding and operate in two, and occasionally even three, shifts. Notably, 13% of schools—serving 72% of all primary students—exceed the standard classroom size of 28 pupils (UNICEF, 2022). Such overcrowding thus already limits effective, student-centered instruction and reduces opportunities for individualized support, extracurricular activities, and remedial programs, even before accounting for potential additional disruptions caused by climate change.

Beyond school closures, climate change also affects the quality of learning when schools remain open. Rising temperatures have been shown to impair students' cognitive performance and concentration (World Bank, 2024). Climate-related events such as wildfires can also negatively impact students' mental health, with climate anxiety emerging as a growing stressor among youth and further undermining learning outcomes and student retention (World Bank, 2024). Given that, as shown above, climate impacts in Montenegro are projected to further intensify in the

future, negative impacts on student well-being, academic performance and education delivery are expected to only increase over time, especially in the absence of adequate climate adaptation measures.

There is space to improve environmental awareness of Montenegrin students, and green skills of educators. Evidence from the OECD Programme for International Student Assessment (PISA) survey shows that 70% of students in Montenegro report being familiar with climate change and global warming, which is behind the OECD average of 79%. The self-efficacy in environmental understanding among Montenegrin students could also be improved: only 54% feel confident explaining how carbon-dioxide emissions affect global climate change, compared to 63% in the OECD on average. Without a solid understanding of the causes and risks of changing environmental conditions, students' ability to make informed decisions and contribute towards meaningful adaptation solutions diminishes. The results of the Trends in International Mathematics and Science Study (TIMSS) survey further highlight this issue. Montenegrin fourth graders score an average of 466 in environmental knowledge, which is significantly behind EU frontrunners such as Sweden (526), Finland (542), and Poland (557) (TIMSS, 2023). Such disparity underscores the need for enhanced educational efforts to equip Montenegrin students with adequate knowledge and skills on climate-related subjects, including adaptation. In addition, although 79% of school principals in Montenegro report that global warming and climate change are covered in the curriculum, this is still below the OECD average of 88% (PISA, 2018). Equally, the Education Reform Strategy 2025-2035 of Montenegro developed by MoESI underscores that there is space for strengthening the green skills of teachers in Montenegro.

Project/Programme Objectives:

List the main objectives of the project/programme.

The main objective of the project is to strengthen climate resilience in Montenegro by bolstering the skills of current and future workers in priority adaptation sectors, and lay the foundations for climate resilience attitudes and behaviors early on through the education system while enhancing climate resilience of the system itself.

Project/Programme Components and Financing:

Fill in the table presenting the relationships among project components, activities, expected concrete outputs, and the corresponding budgets. If necessary, please refer to the attached instructions for a detailed description of each term.

For the case of a programme, individual components are likely to refer to specific sub- sets of stakeholders, regions and/or sectors that can be

addressed through a set of well defined interventions / projects.

The table below describes the tentative project components, activities, and expected concrete outputs, providing the foundation for the development of the full project proposal. For each project component, it also presents the corresponding indicative budgets, which may be adjusted and confirmed during the development of the full project proposal, based on a detailed costing exercise.

Project/Programme Components	Expected Concrete Outputs	Expected Outcomes	Amount (US$)
1. Skills for greater climate resilience in priority adaptation sectors	Output 1. Skills of current and future labor force and research quality in the priority adaptation sectors strengthened Activity 1.1. Undertake in-depth skills needs analyses in the priority adaptation sectors in Montenegro's Climate Change Adaptation Plan to identify gaps in the existing VET/HE/LLL offer Activity 1.2. Develop new VET/HE/LLL programs/tracks/modules on climate-smart practices in priority adaptation sectors, based on identified skills needs and gaps, in collaboration with industry Activity 1.3. Modernize selected VET workshops/HE laboratories with latest technology and equipment to foster climate-adaptive learning and research in priority adaptation sectors, and provide educators with training on its effective use Activity 1.4. Support competitive research grants to advance the	Outcome 1. Strengthened climate-resilient human capital and knowledge systems in priority adaptation sectors	1,000,000

	knowledge frontier on climate-resilient practices in the priority adaptation sectors Activity 1.5. Assess the feasibility of establishing a HE Centre of Excellence to support cutting-edge research on climate-smart practices in one of the priority adaptation sectors		
2. Foundations for climate-resilient attitudes and behaviors	Output 2.1. Climate resilient retrofitting, repurposing, and nature-based infrastructure solutions implemented at school and pre-school level Activity 2.1.1. Retrofit selected primary/general secondary schools with climate-resilient infrastructure and nature-based infrastructure solutions Activity 2.1.2. Repurpose selected schools into climate-resilient pre-school spaces Output 2.2. School capacity to develop climate-resilient attitudes and behaviors among youth strengthened Activity 2.2.1. Support the operationalization of the new cross-curricular theme “Climate Change” by developing teacher and student guides, textbooks, and other types of support materials Activity 2.2.2. Support student-led climate adaptation projects in selected schools, within formal and complementary extracurricular learning, in	Outcome 2. Enhanced resilience to adapt to climate shocks at the school level	11,400,000

	collaboration with local communities Activity 2.2.3. Strengthen capacity of teachers and school principals to effectively support students on climate adaptation learning (via training, communities of practice, etc.)		

3. Learning and Knowledge Management	Output 3. Capacity of key stakeholders to effectively act on climate adaptation improved Activity 3.1. Deliver capacity-building on climate adaptation and project management at MoESI Activity 3.2. Organize a concluding national conference	Outcome 3. Enhanced institutional learning and capacity for effective project implementation and replication	111,521
4. Project/Programme Execution cost			1,313,364
5. Total Project/Programme Cost			13,824,885
6. Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)			1,175,115
Amount of Financing Requested			15,000,000

Projected Calendar:

Indicate the dates of the following milestones for the proposed project/programme

The below table shows the indicative project calendar.

Milestones	Expected Dates
Start of Project/Programme Implementation	April 2027
Mid-term Review (if planned)	October 2029
Project/Programme Closing	April 2032

Terminal Evaluation	Within 6 months after project closing

PART II: PROJECT / PROGRAMME JUSTIFICATION

A. Describe the project/programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience.

The project is structured around three main components:

Component 1: Skills for greater climate resilience in priority adaptation sectors

This Component aims to strengthen the skills of the current and future labor force and research quality in the priority adaptation sectors - agriculture, water, health and tourism - as defined by the Ministry of Ecology in Montenegro's Climate Change Adaptation Plan (2025). It actively contributes to climate resilience by developing skills in the priority adaptation sectors to better anticipate and manage climate risks and mainstream sector-specific adaptation measures, while building research capacity to generate cutting-edge climate resilience solutions.

The following indicative activities are foreseen under Component 1:

- Activity 1.1. Undertake in-depth skills needs analyses in the priority adaptation sectors to identify additional gaps in the education and training offer (VET/HE/LLL).

  Such diagnostics will aim to understand evolving skills needs in the priority adaptation sectors and identify gaps in the skilling (VET/HE/LLL) offer, as relevant. Focusing specifically on the priority adaptation sectors (agriculture, water, health and tourism), it will complement the broader, strategic-level analysis foreseen to be delivered under the CCAP by Q4 2026, which aims to "recognize the key shortcomings in the existing education system and relevant institutions with regard to climate change, in particular adaptation".

- Activity 1.2. Develop new programs/tracks/modules (VET/HE/LLL) on climate-smart practices in priority adaptation sectors, based on identified skills needs and gaps, in collaboration with industry.

  By proposing interventions targeted at the priority adaptation sectors, the activity will complement the broader, strategic-level plan "for the future educational program and capacity building", foreseen to be delivered under the CCAP by Q4 2026.

- Activity 1.3. Modernize selected VET workshops/HE laboratories with latest technology and equipment to foster climate-adaptive learning and research in priority adaptation sectors, and provide educators with training on its effective use.

The technology and equipment to be provided may involve relevant digital tools, where appropriate.

- Activity 1.4. Support competitive research grants to advance the knowledge frontier on climate-resilient practices in the priority adaptation sectors.

This activity will support a competitive research grant program to generate new knowledge on climate-resilient practices across the four priority adaptation sectors. Grants will be awarded through a transparent, merit-based selection process to eligible institutions, with a focus on producing actionable, context-specific evidence.

- Activity 1.5. Assess the feasibility of establishing a HE Centre of Excellence to support cutting-edge research on climate-smart practices in one of the priority adaptation sectors.

This activity will assess the feasibility of establishing a Higher Education Centre of Excellence dedicated to cutting-edge research on climate-smart practices in one of the priority adaptation sectors, examining the institutional, financial, and governance dimensions, among others, required for its sustainable operation. The assessment will also evaluate the potential for regional collaboration and linkages, exploring opportunities for shared knowledge and joint research across the Western Balkans region.

Component 2: Foundations for climate-resilient attitudes and behaviors

This Component aims to lay the foundations for climate-resilient attitudes and behaviors early on, already at the school level, recognizing that lasting societal change begins with the youngest generation. Together, the foreseen activities create a virtuous cycle: better-prepared teachers and school management foster more climate-literate students, who in turn contribute to more resilient communities — building the human capital that underpins effective, long-term climate adaptation. In light of the increasing climate threats faced by Montenegro, strengthening the climate resilience of selected schools and repurposing of selected school facilities into climate-resilient pre-school spaces is equally planned.

The following indicative activities are foreseen under Component 2:

- Activity 2.1.1. Retrofit selected schools with climate-resilient infrastructure (e.g. improved ventilation, insulation, seismic retrofitting,

solar panels, waterproofing, rainwater harvesting systems, etc.) and nature-based infrastructure solutions (e.g. tree planting, etc.).

This activity addresses the systemic need of future-proofing Montenegro's educational infrastructure against the growing threats posed by climate change. As shown by Ambasz, Holla, and Sabarwal (2022) and World Bank (2025), of all education investments, physical learning environments have among the highest potential to help education systems mitigate and adapt to climate change. This activity thus takes a strategic, long-term approach to ensure that schools are not only structurally sound but can also function as hubs of resilience within their communities. By prioritizing climate resilience in education infrastructure development, this activity supports national education goals, and reduces vulnerability among children, students and educators. It also lays the foundation for cross-sector collaboration, linking education with urban planning, disaster risk reduction, and environmental sustainability. Ultimately, this activity will ensure that educational spaces are not only safe and functional but also exemplars of climate-smart development.

Tangible, on-the-ground improvements—such as flood-proofing buildings, enhancing ventilation to cope with heatwaves, or seismic retrofitting — will be integrated into selected schools. In addition, nature-based infrastructure solutions (e.g. planting trees to reduce heat) will be used to further improve the vicinities of selected schools in order to better cope with climate effects. There is evidence showing that trees, for example, can be effective in reducing air temperature, glare, and UV radiation, while shading provided by mature trees could reduce surface temperatures by as much as 60 degrees F (World Bank, 2024). Such upgrades will further complement high-tech retrofitting by lower-cost alternatives. Through a combination of such strategies, the activity will seek to maximize both level of comfort, safety and cost-effectiveness.

The type of interventions to be pursued, as well as the selection of education establishments to benefit from infrastructure upgrades, will be determined based on the degree of climate vulnerability of their locations, type of climate hazards the schools are facing, and a comprehensive analysis of infrastructure needs, to be developed as part of the full project proposal. Where relevant, such analysis will draw on the insights of the School Infrastructure Assessment project (building on the pilot phase mentioned above), conducted by the MoESI and UNOPS, in cooperation with UNICEF Montenegro. Under the School Infrastructure Assessment project, a functional analysis of school infrastructure across Montenegro is being developed, having already covered 40 schools as per the latest, and aiming to extend to all Montenegrin school facilities. The analysis includes an assessment of compliance with construction standards, disaster risk resilience (with a particular focus on resilience to seismic risks), as well as curriculum requirements, inclusivity measures and basic functional conditions such as occupancy, water supply, sanitation and hygiene, energy efficiency and accessibility for children with disabilities. Where relevant, this study will provide important baseline information that will help to establish investment requirements under this activity. The study will be further complemented by a

dedicated analysis of the climate vulnerability of Montenegro's schools, with a specific focus on hydrometeorological risks, to be undertaken during the development of the full proposal for this project.

While a comprehensive analysis of the climate vulnerability of Montenegro's school infrastructure will be conducted during the development of the full project proposal to inform the selection of target investment sites, a preliminary assessment of climate-related risks across the school network has been developed to serve as a foundation for further analysis (see the Context section for further details). As shown above, schools in Montenegro face different types of climate risks depending on their location. Schools in Northern Montenegro face an elevated risk of urban floods and droughts. In contrast, schools in the central region are more vulnerable to river flooding, heat and landslides. Landslides and heat also affect schools in the South, where certain are also prone to coastal flooding.

Distinct climate threats necessitate tailored retrofit measures, with specific interventions best suited to the unique risk profiles of individual schools. For schools in areas prone to flooding and landslides, structural adjustments may be particularly relevant. These include improved gutters and drainage systems to guide water away from schools, or the construction of retaining walls, which can mitigate damage from flood- and rainfall-related landslides and prevent water infiltration. In addition, permeable paving materials can be considered to enhance on-site water absorption, reducing stormwater runoff. Interventions should also ascertain that critical equipment, such as utilities and electrical services, are located above the projected ~~d~~ flood level.

For schools in regions susceptible to extreme heat, measures to lower classroom temperatures will be particularly relevant. These include improved ventilation and air-conditioning systems, as well as lower-cost solutions such as implementing "cool roofs", which are designed to reflect more sunlight than conventional roofs, or planting trees in school vicinities. As noted above, a combination of high- and low-tech solutions, such as retrofitting combined with nature-based solutions such as tree planting, can create an effective approach to temperature management. In addition, solar panels could be considered to help reduce grid strain, lower cooling costs, and provide backup power during heatwaves or fire-related outages.

In addition, as noted above in the Context Section, besides climate-related hazards, schools in Montenegro are also exposed to seismic risks, in particular in the coastal region around the Budva, Ulcinj, Bar and Tivat areas, which lie closer to the Adriatic fault line, as well as certain areas in the central region such as Danilovgrad, Podgorica and Cetinje (GFDRR, 2017). Therefore, where investments in climate adaptation retrofitting may be already planned—such as structural reinforcement, insulation, or drainage improvements—there is an opportunity to integrate seismic retrofitting measures, including structural bracing, roof anchoring, and foundation strengthening. Combining adaptation measures with seismic retrofitting enhances overall structural resilience while optimizing cost-efficiency by

addressing multiple vulnerabilities within a single investment cycle.

Irrespective of a school's location or the specific climate risks it faces, adherence to national building codes across all infrastructure interventions will be ascertained to ensure structural safety and long-term resilience in all instances.

- Activity 2.1.2. Repurpose selected schools into climate-resilient pre-school spaces

This activity 1 will seek to repurpose selected primary schools into climate-resilient pre-school spaces, increasing the number of children who can benefit from climate resilient infrastructure from an early age, and whose access to pre-school education is currently hindered. In Montenegro, while the current preschool education enrolment (coverage rate of 3–6-year-old children) is 7% higher than in 2021, it stands at 76% (75% for girls, 77% for boys) (Education Reform Strategy 2025-2035), behind the EU-27 average of 95% (Eurostat, 2023). Repurposing into climate-resilient pre-school spaces could be considered in schools with excess space that are currently not fully utilized, given the significant discrepancies between the supply and demand for education infrastructure in Montenegro. While some Montenegrin schools are grappling with overcrowding, others are experiencing declining student numbers. According to the Education Sector Analysis, more than 70% of all primary students in Montenegro enroll at 13% of schools, which have overcrowded classrooms, while 87% of primary schools operate with smaller-size classes—often with fewer than 28 students per class—and have excess space. Schools in the central and southern regions are particularly affected by overcrowding and often operate in three or more shifts (Education Reform Strategy 2025-2035). The Northern region, on the other hand, is experiencing population outflows, given the high migration to the capital or to the coast (where the economic welfare is concentrated), as well as higher risk of poverty, with persistent gaps in access to education, health, and jobs (CPF, 2025-2029). Therefore, repurposing of schools with climate resilient pre-school spaces could be considered in the Northern region in particular, for example in areas where there are currently no pre-school facilities or where existing pre-schools require substantial renovations. Such investments would simultaneously contribute to the broader, sustainable development of the Northern region.

- Activity 2.2.1. Support the operationalization of the new cross-curricular theme “Climate Change” by developing teacher and student guides, textbooks, and other types of support materials

This activity focuses on equipping students with the knowledge, skills, and values needed to thrive in a climate-impacted world, aiming to cultivate a generation of informed and proactive individuals who can contribute to climate resilience and adaptation efforts now and in the long-term.

Central to this initiative in Montenegro has been the development of a national

cross-curricular theme titled “Climate Change”, which is set to become an integral part of Montenegro’s national curriculum framework by Q1 2027. Rather than limiting climate education – including adaptation – to specific subjects, the theme holistically integrates climate education across all educational levels and disciplines, ensuring an interdisciplinary learning experience where students examine climate change through scientific, economic, social, and cultural perspectives.

To support the operationalization of the new cross-curricular theme, this activity will support the development of gender-responsive guides, textbooks and other types of learning and support materials for teachers and students, as necessary. Such materials may include, for instance, ready-to-use lesson plans, challenge briefs, student worksheets and assessment examples to be used as needed in regular classes and/or extracurricular activities, and where relevant may provide guidance on operationalizing the cross-curricular theme through project-based learning. These resources will expose students to the multifaceted nature of climate challenges and emphasize the importance of inclusive, equity-based approaches to climate resilience, and will also be made accessible in digital format through the MoESI Digital School Platform. A particular focus will be placed on ensuring that all students—regardless of gender—see themselves as capable contributors to climate solutions. This effort responds directly to gaps identified in the Education Reform Strategy 2025–2035, which highlights the lack of focus on critical thinking and the absence of gender-responsive perspectives in current educational materials. A recent review of Montenegrin curricula and textbooks revealed a dominance of the generic masculine form, limited gender-neutral language, and minimal attention to gender-relevant topics. These omissions contribute to the invisibility of women and girls in learning materials, reinforcing stereotypes and traditional roles—often portraying women in submissive or domestic roles, with scarce representation in leadership or professional contexts. Through inclusive content and critical engagement with gender roles, these materials will help dismantle stereotypes and create a more equitable foundation for climate education.

- Activity 2.2.2. Support student-led climate adaptation projects in selected schools, within formal and complementary extracurricular learning, in collaboration with local communities

Increased student involvement in practical, hands-on climate adaptation projects is essential for transforming education into meaningful action. These initiatives allow students to apply theoretical knowledge in real-world contexts, deepening their understanding of climate risks and adaptation strategies. Such experiential learning fosters a sense of ownership and responsibility, empowering students to become active contributors to climate resilience.

Moreover, when these projects are implemented in partnership with local communities, they strengthen intergenerational learning and build trust between schools and their surrounding environments. Community

collaboration ensures that adaptation efforts are locally relevant and culturally grounded, while also reinforcing social cohesion. Ultimately, such initiatives not only enhance student learning outcomes but also position schools as hubs of innovation and resilience, capable of driving broader community engagement and long-term climate action.

This activity will thus involve the launch of student-led climate adaptation projects within formal and complementary extracurricular learning, through which students could gain exposure to real-world climate impacts faced by local stakeholders and develop their thinking on potential adaptation strategies. In addition, this output will support Montenegro in addressing the challenge of a lack of engaging extracurricular activities in the education system, identified in the Education Reform Strategy 2025-2035.

- Activity 2.2.3. Strengthen capacity of teachers and school principals to effectively support students on climate adaptation learning (via training, communities of practice, etc.)

This activity is centered around in-service teacher and principal training and capacity building for climate resilience. Building the capacity of teachers and school leaders is foundational to embedding climate resilience across Montenegro's education system. Teachers are not only knowledge transmitters but also role models and facilitators of critical thinking and problem-solving. Equipping them with up-to-date, context-specific knowledge on climate change and adaptation strategies will ensure that students receive accurate, relevant, and empowering education. In-service training enables educators to integrate climate themes across subjects (incl. foundational literacy and numeracy instruction in early grades, where relevant) and foster a culture of resilience within (and outside, as part of extra-curricular activities) the classroom. Similarly, principals and school leaders play a strategic role in shaping school-wide responses to climate risks. Capacity building for principals in Montenegro will enhance their ability to manage climate-related disruptions, implement risk reduction measures, and lead whole-school adaptation initiatives. Ultimately, investing in teacher and principal training will ensure that climate education in Montenegro is not a one-off intervention but a sustained, system-wide transformation that empowers both educators and learners to respond proactively to the climate crisis.

Montenegro has built substantial flexibility into its curriculum, whereby 15–20% of the curriculum remains open and primarily intended for teachers to integrate locally relevant content that is not included in the national curriculum. Together with the new Cross-curricular theme on climate education, this underscores the very broad level of teacher autonomy and shows that there is a solid institutional opportunity for integrating adaptation-related content into teaching across subjects in Montenegro. Crucial for capitalizing on such an opportunity will be equipping teachers with adequate guidance and examples. In the current Catalogue of certified in-service teacher trainings, of 310 certified trainings only two training programs focus explicitly on climate change, but neither of them on supporting teachers with

integrating climate, and climate adaptation topics specifically, into the curriculum. Given that Montenegro has a mandatory, well-established system for continuous professional development (CPD) for teachers, managed by the Bureau for Education, there is strong potential for rapidly scaling up climate and adaptation-focused CPD. As a result, this activity focuses on the development and implementation of teacher CPD programs on climate adaptation and the intersection of climate with broader societal challenges such as the green transition, social justice, public health, and economics. These CPD programs will build interdisciplinary understanding and pedagogical confidence in effectively integrating these critical themes into curricula, as well as extra-curricular activities, drawing on methodologies for implementing best-practice school-based student engagement programs. The CPD programs will equally build teacher capacity to leverage the recently established EdTech laboratories in primary and secondary schools for practical and tech-enabled learning on climate adaptation and resilience for students.

Beyond training, the capacity of teachers may also be strengthened via the establishment of "climate resilience networks" / communities of practice, which provide further support to teachers, and create collaborative opportunities for exchanging best practices, resources, and innovative methods for integrating climate and adaptation topics into teaching. Such networks can also facilitate knowledge-sharing on latest teacher professional development opportunities related to climate education and create space for enhancing teachers' civic engagement on climate change. Empowered teachers will be better equipped to inspire and engage their students on climate change topics, preparing cohorts of future champions and innovators in environmental sustainability and climate adaptation in Montenegro.

The enhanced CPD offer for teachers under this activity will also support the expansion of literacy, and mathematical and scientific literacy, and digital skills training for teachers, foreseen under the Education Reform Strategy 2025–2035. The Education Strategy's final target for 2035, under outcome indicator 2.0.4, aims to ascertain that 70% of teachers have completed CPD focused on digital skills, literacy and scientific and mathematical literacy, among others. Through this project, the reach and intensity of such training could be further expanded. Such CPD programs are vital for building students' foundational skills – including literacy, mathematical and scientific literacy. These foundational skills are needed to enable students to transfer to higher order and critical thinking skills required to understand complex climate adaptation content, yet showcase important opportunities for improvement in Montenegro, as demonstrated by the outcomes of the PISA testing (See the Context Section and Section I below). Without support for the enhancement of such foundational skills, the return on investment into adaptation-specific education interventions risks remaining limited. In addition, strengthening CPD digital skills programs for teachers supports both teachers and students to develop and strengthen their digital skills, which are critical in the event of school closures due to climate shocks and for allowing the continuation of teaching and learning virtually/online.

Strengthening the capacities of school principals to manage climate risks will be equally essential for ensuring that schools remain safe, adaptive, and operational during climate-related disruptions. As key decision-makers, principals play a critical role in planning, coordinating, and leading school-wide responses to climate hazards such as heatwaves or floods. This activity will also focus on equipping school principals in Montenegro with the knowledge and leadership skills needed to assess risks, implement preparedness measures, maintain the newly retrofitted infrastructure where applicable, and foster a culture of resilience within their institutions. Through continuous CPD programs focused on climate adaptation, principals will gain the tools to integrate risk management into school planning, infrastructure, and daily operations—ensuring continuity of education and the well-being of students and staff.

Component 3: Learning and Knowledge Management

Learning and Knowledge Management is a critical component for ensuring that the interventions foreseen under this project are not only effective in the short term but also sustainable and scalable over time. By systematically capturing and sharing lessons learned and strengthening institutional capacity of the Executing Entity, this component will enable knowledge-building and potential replicability of similar interventions in Montenegro in the future.

The following indicative activities are foreseen under Component 3:

- Activity 3.1. Deliver capacity-building on climate adaptation and project management at MoESI/related agencies

This activity focuses on strengthening the institutional capacity of government institutions in Montenegro to effectively manage, monitor, and replicate education climate resilience projects. Such capacity building could have different forms. First, it would be particularly important to strengthen the capacities at MoESI, including (but not limited to) the Service for Investments and Public Procurement (SIPP) within MoESI. SIPP is responsible for planning and implementing investment activities related to the school infrastructure (incl. construction, reconstruction and adaptation). MoESI, and the SIPP in particular, would thus benefit from targeted technical assistance in project management (e.g. project coordination and oversight, technical specifications and cost efficiency, supervision and maintenance, financial management, environmental and social (E&S) safeguards, public procurement, etc.) and monitoring and evaluation (M&E), to enhance the ability to plan, implement, and track progress on climate retrofitting of the education infrastructure, with greater efficiency and accountability. Improved project management practices will also contribute to better coordination, resource allocation, E&S compliance, and stakeholder engagement, while strengthened M&E systems will enable data-driven decision-making, timely identification of challenges, and adaptive responses. Over time, these

enhanced capacities will build institutional resilience and ensure that MoESI is well-positioned to scale up successful climate resilient infrastructure interventions and lead similar initiatives, a large number of which is already in the pipeline as shown in Section F, with high degree of effectiveness and efficiency. The technical assistance could be operationalized through a series of capacity-building workshops and related activities.

Among others, targeted capacity-building could similarly be extended to the Bureau of Education, under MoESI's purview, and in particular its Teaching Department. Among others, the Teaching Department is in charge of quality assurance of teaching practices in Montenegro's schools and will therefore play a key role in ensuring that the cross-curricular "Climate Change" theme (see more under Component 2) is being implemented effectively by teachers.

- Activity 3.2. Organize a concluding national conference

This activity focuses on generating actionable insights from the project's implementation to inform future climate resilience efforts in Montenegro's education sector and beyond. Project lessons learned will be presented at a concluding national conference, which will be accompanied by the dissemination of a handbook based on systematic documentation and analysis of successes and challenges from the project. This will ensure that valuable lessons are not lost but instead used to refine future programming, aiding the future replicability of the project's interventions. Please see more details on these activities in Section G below describing the learning and knowledge management aspects of the project.

B. Describe how the project/programme provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project/programme will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

The project will provide a range of economic, social and environmental benefits, with significant positive impacts for vulnerable groups within Montenegro's communities.

In terms of economic benefits, the project aims to reduce the potential financial burden caused by climate-related disruptions by retrofitting schools with climate-resilient infrastructure. These upgrades will reduce operational costs and ensure uninterrupted educational services during climate incidents, with a particular focus on supporting schools in areas most vulnerable to climate shocks. Ensuring uninterrupted educational services during extreme weather events will also help prevent the exacerbation of educational inequities, as disadvantaged students (e.g. disadvantaged socio-economic

backgrounds, students with disability, etc.) tend to be disproportionately affected by emergency school closures and suffer from the largest setbacks in learning outcomes, as highlighted during the COVID-19 pandemic. In addition, by equipping school principals with adequate knowledge and skills for managing climate-related risks at the school level, the potential economic damage from climate-induced hazards will be reduced. Similarly, by developing the skills needed to manage climate change impacts and mainstream adaptation practices in the priority adaptation sectors, the project will help reduce the long-term economic costs of climate-related events.

With respect to social benefits, the project will contribute to enhancing the climate resilience of Montenegro's communities through education, with particular benefits for disadvantaged youth. By incorporating adaptation themes into learning resources, the project ensures that students increase their awareness of climate adaptation and understanding of potential adaptation strategies, empowering them to champion adaptation innovation for the benefit of Montenegro's communities in the long run. Students from socio-economically disadvantaged backgrounds stand to gain the most from such updates of learning resources, as their levels of environmental awareness tend to be lower. For example, while 77% of Montenegrin students in the top quarter of the index of economic, social and cultural status (ESCS) report knowing about or being very familiar with climate change and global warming, the same is true only for 62% of students in the bottom quarter of ESCS (PISA, 2018). Similarly, by supporting the development of gender-responsive learning materials on climate change and adaptation under Component 2, the project could help narrow the gender gap in environmental awareness among students, whereby 73% of 15-year-old girls in Montenegro report high levels of environmental awareness in comparison to only 66% of boys of the same age (PISA, 2018). In addition, given that under Component 2 of the project, repurposing of existing schools with excess space to serve as new climate resilient pre-school spaces is foreseen, the project is expected to positively impact female employment rates, currently lagging behind those of men by more than 10 percentage points, while freeing up time spent on caring for children, which is disproportionately shouldered by women (see Context section above). In addition, under Component 2, the project will support the launch of student-led, hands-on student activities involving local stakeholders, with the view of promoting collaboration, and allowing communities to share first-hand knowledge and engage in practical climate solutions projects. By fostering such inclusive activities and community collaboration, the project will strengthen social cohesion and empower communities to take collective action against climate risks. The project will ensure the inclusion of diverse community members in such activities.

The project has significant environmental benefits. By integrating adaptation themes into learning, empowering teachers and school principals to effectively incorporate such themes into teaching and school operations, and elevating the profile and quality of adaptation-related HE research in priority adaptation sectors, the project cultivates broader, long-term environmental consciousness in Montenegro's society and increases its capacity to tackle

climate challenges sustainably and through innovative measures. Additionally, the foreseen launch of hands-on, community-based student learning activities fosters early innovation with respect to effective adaptation strategies, contributing to Montenegro's long-term environmental resilience.

In order to avoid or mitigate any negative impacts, the project will ensure full compliance with the World Bank's Environmental and Social Standards (ESSs), Environmental Health and Safety (EHS) Guidelines and Good International Industrial Practices (GIIPs), as detailed in Section E below.

C. Describe or provide an analysis of the cost-effectiveness of the proposed project/programme.

The proposed project is designed to build climate resilience through a comprehensive approach that includes skills upgrading, infrastructure improvements, enhanced student engagement and learning, community partnerships, teacher and principal training, and learning and knowledge management. The simple, preliminary analysis below, to be further refined and elaborated, explains how each component is strategically designed to maximize benefits and minimize costs by reducing future damages, enhancing learning outcomes, and strengthening community resilience.

Component 1 delivers cost-effectiveness by ensuring that investments in education and training are precisely targeted and systemically aligned with the skills demands of a climate-resilient economy. By grounding any new program development in the priority adaptation sectors in rigorous skills needs analyses and close collaboration with industry, the component ensures that the skills to be developed meet the actual requirements of an effective transition towards a climate-resilient economy. Modernization of VET and HE facilities — paired with educator training — maximizes the productive life of infrastructure and enhances its meaningful use. By supporting the development of the knowledge and practical skills to implement climate-smart practices in the priority adaptation sectors, the component generates long-term fiscal savings: a workforce capable of anticipating and responding effectively to climate risks is fundamentally less reliant on costly emergency interventions and post-disaster recovery measures. Competitive research grants reinforce this dynamic by advancing the knowledge frontier on climate-resilient practices, translating into better-informed decisions and more effective adaptation at scale, though a rigorous, results-oriented inquiry. Finally, the feasibility-first approach to high-cost institutional investments, such as a potential Centre of Excellence, reflects fiscal prudence, ensuring that major future commitments are grounded in evidence of need and viability before resources are committed.

Component 2 involves upgrading education infrastructure with climate-resilient features at school and pre-school levels. This investment is expected to significantly reduce future costs associated with climate-related damages and disruptions by ensuring the safety of students and staff and minimizing

educational interruptions during extreme weather events. By upgrading school facilities with features such as improved insulation or waterproofing, the project can prevent costly repairs and maintenance that would otherwise be necessary after climate-related incidents. These proactive measures not only safeguard the physical infrastructure but also enhance the overall resilience of the education system, making it better equipped to handle future climate challenges. Furthermore, resilient schools can serve as community hubs during emergencies (limited to defined areas of school premises and for the duration of extreme climate event responses), providing shelter and resources to local residents, which can lower the overall burden on emergency services and reduce recovery costs.

Currently, there is no publicly available data estimating the climate-related damage costs to Montenegro's school network. However, as noted above, among the main climate risks Montenegro is vulnerable to, flooding by itself results in approximately $90 million in damages annually. Assuming conservatively that only a small share (e.g. 5%) of these losses impact the education infrastructure would equate to around $4.5 million in damages per year. Over the five-year duration of this project, the cumulative estimated cost to the school network would amount to approximately $22.5 million. These figures should be regarded as conservative estimates, as they do not account for the anticipated intensification of climate-related hazards in Montenegro in the coming years, or hazards other than floods. Furthermore, the approximations are unable to fully reflect the impacts of major climate events—such as the 2010 floods—where significantly greater damages could reasonably be expected.

In parallel, Montenegro is moderately vulnerable to seismic activity, with earthquake-related damages estimated at approximately $70 million annually, as noted above. Applying the same conservative assumption that 5% of these losses could impact education infrastructure, this would translate to an additional $3.5 million in annual damages to schools. Over five years, this amounts to $17.5 million in cumulative earthquake-related damage to the education sector.

Taken together, the combined estimated damage to school infrastructure from climate-related (floods) and seismic hazards could reach $40 million over five years. Even a moderate reduction in these damages achieved through targeted retrofitting and resilience measures would yield substantial benefits. For instance, preventing just 50% of the estimated $8 million in annual damage (from both climate/flood and seismic hazards) would result in $4 million in annual savings, or $20 million over the project's duration.

Component 2 also focuses on updating learning materials and creating hands-on, practical opportunities for students to participate in adaptation-focused learning activities in collaboration with local communities. Educating students on climate change effects through a combination of theoretical and hands-on approaches fosters greater awareness and informed decision-making among the young generation, enhancing long-term preparedness and

adaptation capacity and thereby equally reducing the need for costly emergency responses and recovery efforts. In addition, creating partnerships between schools and local stakeholders fosters collaboration and shared responsibility for climate adaptation, leading to more resilient communities in the long-run.

Component 2 also involves developing and implementing continuous professional development programs for teachers and school principals focused on climate adaptation. Investing in teacher training ensures that educators are well-equipped to effectively integrate such topics across curricula and into extracurricular activities, leading to better student outcomes and long-term resilience. Effective teacher training programs can also have a multiplier effect, which can be achieved through the foreseen “climate action networks”, as trained teachers disseminate knowledge and best practices within their communities. Equally, equipping school principals with the required knowledge and skills for managing risks related to climate hazards at the school level increases the school resilience, helping to minimize the scale of future climate-related education disruptions and lowering the cost of future recovery measures.

Component 3 promotes learning and knowledge management, ensuring that resources are used efficiently and strategically and institutional capacity is sufficient. By systematically capturing lessons learned and disseminating the findings, this component helps avoid repeating costly mistakes and supports efficient future scale-up efforts. Furthermore, by building the capacity of key institutions and decision-makers, it enables future projects to be implemented more efficiently and at lower cost.

Overall, the project's cost-effectiveness is evident in its potential to provide long-term benefits that justify the initial investment, making it a valuable initiative for Montenegro's climate adaptation efforts.

D. Describe how the project/programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, national adaptation plan (NAP), national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.

The project is consistent with several of Montenegro’s strategic documents, which emphasize the need to develop climate resilience of schools and equip students and teachers with adequate climate literacy skills.

The project is directly linked to Montenegro’s Climate Change Action Plan 2025-2035 (CCAP) and aligned with its activities. Component 1 focuses squarely on skill building activities in the priority adaptation sectors defined by the CCAP – agriculture, water, health and tourism. More broadly, the project also supports CCAP’s cross-cutting measure CC2.1.4: “educational programs in schools, higher education (University/LLLs), and relevant

sectoral institutions, that raise levels of awareness, capacity and preparedness of climate change and its impact."

Ensuring that schools are resilient to the impacts of climate change is a key component of the Education Reform Strategy 2025-2035 of Montenegro, developed by MoESI (see the Context Section above), highlighting that "A climate-resilient school infrastructure must be clearly defined, developed, improved and maintained over the next decade, with appropriate investments, in order to mitigate the effects of climate change and foster greater resilience to external climate and weather-related risks". The strategy proposes activities for addressing such challenges under Measure 4.1.4, which is to "Develop and update construction standards for educational institutions, ensuring that buildings are climate-resilient and energy-efficient, in line with the findings of a comprehensive school infrastructure analysis". As noted above, this incorporates a joint school infrastructure assessment, which is being undertaken jointly with the United Nations Office for Project Services (UNOPS), the European Investment Bank (EIB), and UNICEF Montenegro, as well as the development and updating of building standards for education infrastructure facilities, ensuring schools are climate resilient and energy efficient.

Equally, the Education Reform Strategy 2025-2035 acknowledges the importance of strengthening the development of green skills among teaching staff and strengthening the CPD of teachers and school leaders more broadly.

E. Describe how the project/programme meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.

The project, where it foresees improvements to Montenegro's education infrastructure, will strictly adhere to the country's national building codes, while ensuring overall full compliance with the World Bank's Environmental and Social Standards (ESSs).

ESSs of the World Bank relevant for Project activities (primarily those within Component 2) are ESS1 (Assessment and Management of Environmental and Social Risks and Impacts), ESS2 (Labor and Working Conditions), ESS3 (Resource Efficiency and Pollution Prevention), ESS4 (Community Health and Safety) and ESS10 (Information Disclosure and Stakeholder Engagement).

The project complies with ESS1 as the Environmental and Social Management Plan (ESMP) will need to be developed prior commencement of any works within Component 2. ESMP will list measures to be taken during the implementation and operation of a project to eliminate or offset adverse environmental and social impacts, or to reduce them to acceptable levels; and the actions needed to implement these measures.

The project will implement comprehensive environmental safeguards and conduct detailed impact assessments. Prior to any school renovation, thorough site evaluations will be conducted to ensure responsible land use, resource availability, and environmental sustainability. The use of eco-friendly building materials and energy-efficient technologies will minimize environmental impacts while enhancing long-term resilience.

Compliance with ESS2 will be ensured by OHS provisions (included in the ESMP) that are designed and implemented to address identification of potential hazards to Contractors employed within Component 2, provision of preventive and protective measures and enabling adequate emergency prevention and preparedness and response arrangements to emergency situations. To prevent risks related to Sexual Exploitation and Abuse (SEA) and SH Harassment (SH) during small construction works, the project will implement targeted preventive measures such as awareness-raising sessions for workers and community members, a clear code of conduct, and confidential reporting mechanisms. All contractors and subcontractors will be required to comply with these measures as part of their contracts.

Implementing activities within Component 2 on retrofitting education buildings by implementing technically and financially feasible measures for improving efficient consumption of energy and contributing to resource efficiency complies with requirement of the ESS3 and waste management issues will be covered by the ESMP to ensure minimization of waste generation, and enable reuse, recycle and waste recovery to extend possible and in a manner that is safe for human health and the environment.

The project complies with ESS10 as it will provide a range of economic, social and environmental benefits, with significant positive impacts for vulnerable groups within Montenegro's communities. In addition, social safeguards will be established to prevent any displacement or disruptions to local communities. Community involvement will be central to the project, with active participation from students, parents, and teachers to ensure that school improvements meet local needs. Strict enforcement of gender and social inclusion policies will prevent discrimination and exclusion, in particular for students with disabilities at school renovation stage. Special attention will be given to marginalized groups to ensure they fully benefit from project activities.

At a later stage in the project design a comprehensive stakeholder engagement plan, grievance mechanism, etc. will be developed. Robust systems for collecting feedback and grievances from the community will be established to ensure that any concerns are promptly addressed. The project will actively encourage and facilitate participation through accessible channels, with special attention to vulnerable groups. Feedback will be systematically tracked, responded to, and the loop closed by informing complainants of the outcomes and actions taken.

The project, where it foresees improvements to Montenegro's school infrastructure, will strictly adhere to the country's national building codes. As noted above, under the School Infrastructure Assessment project, which conducted through collaborative efforts between UNOPS, the EIB and UNICEF Montenegro, the development and updating of construction standards for educational institutions is foreseen. Activities under Component 2 of this project will therefore follow closely the progress of the Working group to be formed under the School Infrastructure Assessment project for this purpose, and the regulations and guidelines that will be prepared. In this way, Component 2 will seek to ensure full compliance with the latest applicable national standards for modern and climate-resilient education infrastructure in the country. In addition, during the full project preparation phase, key stakeholders (e.g. local school leaders) will be consulted and actively involved in the planning and design process to ensure infrastructure improvements meet local needs.

F. Describe if there is duplication of project/programme with other funding sources, if any.

The project is not duplicative of existing funding sources but rather seeks complementarities with ongoing initiatives. Complementarity with existing investments was sought through active consultations with national authorities and other development partners active in the country during the development of this project's concept (see Section H).

Investment foreseen under Component 2, aiming to strengthen the climate resilience of the education infrastructure in Montenegro, complements ongoing "umbrella" capital investment projects undertaken in collaboration with other development partners, including: i) 11 mil EUR grant channeled through the Western Balkans Investment Framework (WBIF) enabling 13 schools, from kindergarten to secondary schools, to be modernized with high-speed internet connections and more energy-efficient buildings, complemented by 18 mil EUR loan and 2.5 mil EUR technical assistance from the European Investment Bank (EIB), ii) 20 mil EUR loan from the European Bank for Reconstruction and Development (EBRD) aiming to finance various energy efficiency measures in 18 elementary schools, 3 secondary schools, 2 kindergartens and one higher education institution , iii) grants and loans from the Council of Europe Development Bank (CEB), supporting the construction of 9 preschools (infrastructure built in a manner to withstand identified climate vulnerabilities using resilient materials and construction practices), and iv) grants and loans from the EIB, facilitating the construction of 5 schools, reconstruction and expansion of 3 preschools, and adaptation and upgrading of 10 vocational secondary schools, supported by a climate resilience and vulnerability assessment of the targeted facilities. In addition, it is worth highlighting that education infrastructure facilities are among the primary beneficiaries of the public building energy efficiency improvement project, implemented by the Ministry of Energy in partnership with KfW Bank (Education Reform Strategy 2025-2035).

Under the government-adopted Reform Agenda—which outlines the reforms Montenegro must implement to access funding from the European Growth Plan for the Western Balkans—additional investments in education infrastructure are planned. While the Reform Agenda primarily emphasizes new construction, given the overcrowding challenges faced by Montenegrin schools, the Agenda also includes foreseen reconstruction/upgrading investments that are not mentioned above and for which it will be important to avoid overlap with this project. Such education infrastructure investment projects at pre-primary, primary and secondary levels from the Reform Agenda are summarized in Table 3 below.

Table 3: Capital investment projects in education at pre-primary, primary and secondary levels foreseen by Montenegro's Reform Agenda 2024-2027, excluding new construction

Project	Source	Budget **(EUR)**	Description	**Foreseen implementation year**
Reconstruction and upgrading of the kindergarten in Zabjelo settlement in Podgorica	WBIF/EU grant/budget	c. 5.3million	The goal of the project is the reconstruction of the existing kindergarten with an area of 1,500 m2 with the extension of another 1,500 m2 in the scope of the DUP "Stambena zajednica VI Stara Varoš-izmjene i dopune" in Podgorica.	2024/2025
Reconstruction and upgrade of the kindergarten in Kotor	WBIF/EU grant/budget	c. 2.5million	The goal of the project is the reconstruction of the existing building with an area of 2000m2 in the scope of the DUP "Dobrota"; in Kotor.	2024/2025
Reconstruction and upgrade of the kindergarten in Momišići settlement, Podgorica	WBIF/EU grant/budget	c. 3.6million	The goal of the project is the extension of 600m2 and the reconstruction of the existing building with an area of 1600m2, kindergarten "Pčelica"; in the scope of DUP "Momišići"; in Podgorica.	2026/2027
Extension and upgrade of the kindergarten in Donja Gorica settlement in Podgorica	Capital budget	1.2mil	The goal of the project is the reconstruction of the existing building with an area of 365m2 and an extension of 550m2, in the scope of the DUP "Donja Gorica"; in Podgorica	2024/2025
Reconstruction of buildings of the Bošković-Đurović-Laketić family foundation in Srbina settlement, Herceg Novi	Capital budget	1.56mil	The goal of the project is to create better conditions for children's education and achieve optimal conditions for teaching.	2024/2025
Extension of elementary school "Vlado Milić", Podgorica	Capital budget	1.2 mil	The goal of the project is to create better conditions for children's education and to achieve optimal conditions for teaching.	2024/2025
Extension of the primary school "Oktoih", Podgorica	Capital budget	2.34 mil	The goal of the project is to create better conditions for children's education and achieve optimal conditions for teaching.	2024/2025
Reconstruction of sports hall for high school "Ing. Marko Radević", Podgorica	Capital budget	c. 0.94mil	The goal of the project is the reconstruction of the sports hall of the high school "Ing. Marko Radević", in order to create optimal conditions for education and work.	2024/2025
Reconstruction of the gymnasium "Tanasije Pejatović", Pljevlja,	Capital budget	1.2 mil	The goal of the project is the reconstruction of the gymnasium building in Pljevlja, in order to achieve optimal conditions for the education and work of students.	2025/2026
Reconstruction and upgrade of the "Stari studentski dom" dormitory in Podgorica	Capital budget	2.4 mil	The goal of the project is the reconstruction of the "Stari studentski dom" dormitory in Podgorica, in order to ensure optimal conditions for students.	2026/2027

Energy efficiency project (“umbrella”)	Further unspecified	40 mil	The goal of the project is the reconstruction of existing and construction of new buildings through an energy efficiency project.	2026/2027

Source: Reform Agenda of Montenegro, 2024-2027

The list of education reconstruction projects described above represents the most comprehensive compilation available as per the latest, based on publicly accessible sources and input from development partners, including the level of detail currently known about each project. While the above-mentioned education reconstruction investments by and large focus primarily on improving energy-efficiency, digital connectivity, and general furnishings, this project will place emphasis on supporting infrastructure investments in support of climate resilience more specifically. Complementarity will be further ascertained at full project proposal development stage when specific facilities for infrastructure improvements, and the types of infrastructure upgrades to be pursued, will be selected, in order to avoid duplication with the above-mentioned investments, as well as the Education Reform Strategy 2025-2035 and Montenegro’s Reform Agenda under the EU Growth Plan for Western Balkans more broadly. Infrastructure investments will be carefully selected, bearing in mind that certain types of upgrades (e.g. installation of solar panels) can be understood to contribute towards both energy efficiency and climate adaptation. In addition, consultations with other development partners (see Section H) revealed that the list of facilities identified for reconstruction under several of the “umbrella” capital investment initiatives mentioned above remains subject to ongoing revisions. This underscores the importance of commencing implementation of this project as soon as possible after finalizing the specific list of target facilities, while maintaining continuous coordination with partners to avoid duplication of works while ensuring alignment.

Equally, extra-curricular activities foreseen under Component 2 will build on knowledge and experience of relevant existing models, activities and projects (e.g. community projects, competitions, etc.) for youth on climate crisis, climate adaptation, air quality and environmental protection, developed by CSOs, development partners, and other stakeholders.

G. If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.

The project is designed to effectively capture and disseminate lessons learned from the relevant individual components as well as the project overall, within and beyond Montenegro’s education system. The objective is to support potential future replication and upscaling of similar initiatives in the area of climate resilience in and through education and training in Montenegro.

Component 2 aims to develop teacher capacities integrating climate adaptation into teaching, including through a teacher “climate resilience

network". Such as network would provide a platform for educators to collaborate, share resources, and exchange experiences related to effectively integrating adaptation into teaching strategies. Through regular meetings, online forums, and collaborative projects, the network will ensure that lessons learned are continuously captured and disseminated, promoting a collective effort towards building climate resilience.

Component 3 is dedicated to learning and knowledge management, incl. at institutional/decision-maker level, and, embedding learning and knowledge sharing throughout the implementation process. Throughout the project lifecycle, project successes and challenges will be systematically gathered and at the project conclusion summarized in a practical handbook.

The handbook with lessons learned will be disseminated to stakeholders at a national concluding conference, which will be held near the end of the implementation period. This event will highlight major achievements, share practical lessons, and foster dialogue among educators, policymakers, civil society, and development partners. Featuring case studies and stakeholder panels, the conference will help raise awareness, inspire action, and build momentum for advancing climate resilience through Montenegro's education and training system and society.

H. Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

The preparation of this project's concept involved consultations with relevant national authorities, local stakeholders, as well as other development partners. To expand the reach and breadth of initial consultations, the process followed a hybrid approach, combining in-person consultations with virtual discussions. During the development of the full project proposal, these initial consultations will be complemented by a full-scale, comprehensive, gender-responsive consultative process, further amplifying its reach, depth and inclusiveness.

Consultations with national authorities involved a series of meetings with the Ministry of Education, Science and Innovation (MoESI), and the Ministry of Ecology, Sustainable Development and Northern Region Development between June 2025 and March 2026. MoESI consistently highlighted that sustainable development, including climate change mitigation and adaptation, is a high-ranking cross-cutting priority, and emphasized the importance of integrating climate resilient infrastructure upgrades and teacher continuous professional development (CPD) in the project design (reflected under Component 2), as well as leveraging digitalization in the context of the climate adaptation of the education sector (reflected under Component 1). MoESI also emphasized the importance of aligning the project with Montenegro's ongoing efforts toward EU accession, ensuring

complementarities with education reforms pursued in this context (reflected in Section F above). The Ministry of Ecology underlined the importance of climate and climate adaptation education for fostering a lasting behavioral change in the society and strengthening its adaptive capacity. Further, the Ministry of Ecology underscored the need to ensure that the benefits of the project are distributed as equally across regions as possible, in particular in light of the challenges faced by the Northern region (see the Context Section and Section A above). These important considerations will be duly incorporated during the development of the full project proposal, when specific education facilities for intervention will be selected. In addition, further written technical inputs on the draft concept note content were received from both MoESI and the Ministry of Ecology during this period, and duly incorporated.

The development partners consulted in the preparation of this project's concept between May 2025 and March 2026 included the EIB (22 May 2025, virtual), UNICEF Montenegro (25 June 2025, in-person and several virtual exchanges later on), EU Delegation to Montenegro (25 June 2025, in-person), the CEB (3 July 2025, virtual), and the EBRD (forthcoming, virtual). During these consultations, complementarities between ongoing activities and this project were clarified in order to avoid duplication (see Section F).

These consultations will be complemented by inclusive and gender-responsive engagement with non-governmental stakeholders in Montenegro who may be affected by the project, with particular attention given to vulnerable and marginalized groups.

I. Provide justification for funding requested, focusing on the full cost of adaptation reasoning.

The requested funding is essential to cover the cost of supporting the climate resilience of Montenegro's education and training system and broader community. This investment is justified by the comprehensive approach the project takes to strengthen climate resilience through multiple interconnected components.

Baseline scenario (without Adaptation Fund resources)

Without the requested investment, Montenegro's education and training system and broader community will remain highly vulnerable to climate-related disruptions.

Skills gaps already present across Montenegro's priority adaptation sectors will continue to widen as climate pressures intensify. Existing program offer will continue to face gaps, leaving current and future professionals ill-equipped to implement climate-smart practices in their fields. Outdated training facilities will constrain the quality of practical training, while the absence of dedicated research investment will leave the country ill-prepared

for developing locally relevant solutions to its climate vulnerabilities. Cumulatively, this skills deficit will translate into a reduced capacity to anticipate, manage, and respond to climate risks across key adaptation sectors — increasing exposure to climate-related damages and raising the long-term costs of recovery and adaptation for both the public and private sectors.

Schools in Montenegro are currently not sufficiently equipped to respond to climate shocks. The lack of climate-resilient infrastructure poses risks to the safety and well-being of students and staff, as well as the continuity of education during extreme climate events and natural hazards, to which Montenegro is highly vulnerable. Disadvantaged students, who are already at a higher risk of falling behind academically, are likely to be disproportionately affected by such interruptions, creating the risk of exacerbating existing educational inequities. At pre-school level, enrolment rates are below the EU-level, and there is a lack of space available for early learning, require expanding access in line with climate resilience standards.

There are important gaps in the environmental awareness levels of Montenegrin students, while the share of schools currently covering global warming and climate change in curricula falls behind the OECD average. Without effectively integrating climate adaptation across the learning process, students will miss out on critical knowledge and skills needed to understand and address climate challenges. Such knowledge gaps will hinder the development of a generation equipped to contribute to climate resilience and adaptation efforts. In addition, the absence of hands-on learning activities, such as student-led adaptation projects, developed in collaboration with local stakeholders, will hinder the collective action needed to build a resilient and sustainable future in Montenegro. Without such initiatives, there will be fewer opportunities for students to apply their knowledge in practical projects that benefit their communities and may result in innovative climate adaptation solutions.

The lack of investment in teacher and principal capacity building will further compound these issues. At present, the flexibility offered by the institutional framework of Montenegro's curriculum, which allows for integrating adaptation themes across subjects, as well as tailoring education content to local specificities, is not being effectively utilized by teachers. Without supporting teachers in this area through targeted CPD programs, teachers will struggle to effectively relay climate and adaptation-related knowledge to students. The absence of support networks for teachers will hinder collaboration and the sharing of best practices, isolating educators and reducing the overall effectiveness of climate education. Importantly, without adequate support for the development of students' foundational skills – including literacy, mathematical and scientific literacy – students will remain ill-equipped to comprehend more complex, adaptation-related concepts. At present, there is an opportunity for improving such skills among Montenegrin students, as evidenced by the results of OECD's PISA testing. In mathematics, 15-year-old students in Montenegro score an average of 406

points, compared to the OECD average of 472 points. In reading, Montenegrin students score 405 points on average, while the OECD average is 476. In science, the average score in Montenegro is 403 points, significantly lower than the OECD average of 485. Therefore, without strengthening teachers' capacities for effectively teaching foundational skills to students, the return on investment into adaptation-related activities risks being diminished. Likewise, without equipping teachers with expanded digital skills training, both educators and students will remain inadequately prepared to handle potential disruptions to education caused by climate-related hazards, requiring a switch to virtual teaching and learning.

At the school level, without effective CPD for school principals on climate adaptation, schools will remain exposed to climate risks, lacking the leadership needed to implement proactive measures, coordinate emergency responses, and integrate resilience planning into daily operations. Ultimately, this risks compromising student safety, learning continuity, and long-term institutional sustainability.

Finally, in the absence of structured learning and knowledge-sharing mechanisms, valuable insights from project implementation would likely go undocumented, limiting the ability to replicate or scale successful interventions. Furthermore, without targeted technical assistance, national authorities may face challenges in effectively replicating and scaling-up similar interventions, leading to inefficient allocation of resources. effectively

Overall, the lack of investment will leave Montenegro ill-prepared to cope with the increasing impacts of climate change, potentially jeopardizing both educational continuity and long-term community resilience.

Additionality (with Adaptation Fund resources)

With the support of requested investment, Montenegro's resilience to climate-related disruptions will be significantly enhanced in both the short and long-term.

By strategically expanding and modernizing the education and training offer across priority adaptation sectors, the project will help close skills gaps and build a workforce capable of driving climate resilience from the ground up. Current and future professionals equipped with up-to-date, practically grounded knowledge in climate-smart practices will be better positioned to implement effective adaptation measures in their daily work, directly reducing the exposure of key sectors to climate risks and the associated economic costs. The integration of industry collaboration in program design ensures that the skills developed are relevant to labor marked needs. Over time, investment into research and HE capacity has the potential to position Montenegro as a knowledge hub for climate-resilient practices in the region, enabling evidence-based adaptation policy and driving innovation in the field.

The retrofitting of schools with climate-resilient infrastructure will ensure that

educational facilities are better equipped to withstand extreme weather events. Such investment will not only safeguard the physical infrastructure but also ensure continuity in education, minimizing disruptions and providing a stable learning environment for students, especially those from disadvantaged backgrounds. Additionally, school repurposing to integrate climate-resilient pre-school spaces will help ensure adequate availability of facilities of sufficient adaptive quality for early learning.

The integration of comprehensive adaptation themes into the learning process will empower students with the knowledge and skills necessary to understand and address climate challenges. By integrating adaptation themes into the curriculum through the development of high-quality, gender-responsive learning materials, the project will help ensure that students across diverse contexts are exposed to relevant, inclusive, and thought-provoking content that builds both awareness and critical thinking. This will be further reinforced through learning activities that connect classroom learning with real-world application, deepening student engagement and fostering community collaboration. Together, these efforts will create a coherent, action-oriented learning environment that equips students with the competencies needed to navigate and respond to climate challenges.

Integrating climate education into continuous professional development programs for teachers, supported by the requested investment, will significantly enhance teachers' capacity to effectively integrate adaptation themes across subjects, while tailoring such content to local needs. In addition, the establishment of a "climate resilience network" for teachers will facilitate collaboration and sharing of best practices, creating a supportive community and opportunities for knowledge spillovers. Therefore, the investment in teacher training will ensure that educators are well-equipped and empowered to guide students in the acquisition of climate-related knowledge, while boosting their own capacity to act on climate-related issues. Similarly, investing in CPD for teachers in literacy, mathematical and scientific literacy, and digital skills would bring important benefits. Strengthening teachers' capacity to deliver high-quality instruction in these areas will directly enhance students' core competencies, laying the groundwork for more advanced learning. Additionally, strengthening teachers' capacity to effectively integrate digital skills into teaching and convey such knowledge to students will ensure both teachers and students are better prepared to manage disruptions caused by climate-related hazards.

Additionally, by investing in tailored professional development for school principals, the project will enable school leaders to take a more active and informed role in managing climate-related risks. Equipped with the right tools and knowledge, principals will be better prepared to lead resilience planning, implement preventative measures, and respond swiftly to emergencies. This strengthened leadership will help ensure that schools remain safe, functional, and inclusive learning environments, even in the face of climate disruptions. The initiative will also support long-term institutional resilience by embedding risk management into school governance and daily operations—ultimately

protecting students, staff, and the continuity of education.

Through the emphasis on learning and knowledge-sharing and consistent documentation of project successes and challenges, the project will ensure that valuable insights from implementation are systematically captured and used to inform future action. This will enable the replication and scaling of successful approaches, maximizing the long-term impact of the investment. In parallel, targeted technical assistance will strengthen national authorities' (Executing Entity's) capacity to lead and sustain climate resilience efforts across the education sector, well beyond the project's duration.

Overall, the Adaptation Fund's resources will not only enhance the resilience of the education and training system but also build the long-term capacity of Montenegro's communities to effectively engage in climate adaptation efforts, contributing towards a sustainable and resilient future for all.

J. Describe how the sustainability of the project/programme outcomes has been taken into account when designing the project/programme.

The sustainability of the project outcomes has been carefully considered to ensure long-term impact beyond the project's completion. The project's sustainability is promoted through five key features of the project: i) environmentally conscious development of climate-resilient infrastructure, ii) enhancement of students' climate-related skills, iii) strengthening of adaptation capacities of educators and school leaders, iv) institutional capacity building, and v) alignment with national policy priorities.

First, the project will upgrade school infrastructure to strengthen its climate-resilience, which aims to reduce schools' long-term operational resource needs while ensuring that educational services can continue uninterrupted during future extreme weather events. By prioritizing sustainable building materials and energy-efficient technologies, the project will minimize environmental impacts and promote resource efficiency.

Second, the project supports streamlining of adaptation content into the learning process. By developing learning materials that help strengthen students' knowledge and skills in these areas, the project cultivates a critical mass of informed and proactive individuals who can contribute to climate resilience and adaptation efforts, fostering a lasting positive impact on Montenegro's climate resilience beyond the project's conclusion.

Third, the project foresees educators' capacity-building through a refreshed offer of continuous professional development programs for teachers, supporting them in effectively integrating climate topics into teaching methods. The project will also create space for best practice sharing and peer-learning among teachers through a teacher "climate action network". The project activities will thus help embed climate-conscious teaching

methods within the education system and build institutional knowledge around effective implementation of such practices, fostering systemic change and benefitting future teacher, and by extension student, cohorts. In addition, by building capacity of school principals to assess vulnerabilities, implement preparedness measures, and foster a culture of resilience, schools will be better positioned to maintain and scale adaptation efforts after the project ends.

Fourth, this project will capture lessons from implementation and inform future action. By developing a Lessons learned handbook, it will support the replication and scaling of effective practices, extending the project's impact beyond its initial scope. Simultaneously, targeted technical assistance will enhance the Executing Entity's institutional and project management capacity, ability to achieve the NIE status, creating well-embedded, long-term institutional capacity to the benefit of the country long beyond the project's conclusion. equipping MoESI to lead ongoing climate resilience efforts across the education and training sector, ensuring continuity and institutional ownership beyond the project's conclusion.

Finally, given the alignment with national policy priorities of Montenegro (e.g. the CCAP, Education Reform Strategy 2025-2035, etc.), the project is expected to benefit from long-term government commitment, ensuring institutional and financial sustainability.

K. Provide an overview of the environmental and social impacts and risks identified as being relevant to the project/programme.

Both social and environmental risks of the project are rated Moderate. No permanent or temporary land acquisition or asset loss is expected. Potential environmental impacts may relate to construction activities, such as waste generation, dust, noise, and resource efficiency. Social risks may include OHS issues for contractors, temporary disruptions to communities or educational activities during construction, and ensuring equitable access to relevant project activities for all stakeholders, including those in vulnerable or marginalized communities. Any potential risks will be carefully mitigated as described in detail in Section E above.

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law		While the project will ensure full compliance with all applicable domestic and international law, the project is classified as

		requiring further assessment and management here as this principle always applies, as per the Adaptation Fund's E&S Policy.
Access and Equity		Potential risk related to project impact on marginalized and vulnerable groups – needs to be addressed in the ESMP.
Marginalized and Vulnerable Groups	x	
Human Rights		While the project will ensure full respect for human rights through all its phases, it is classified as requiring further assessment and management here as this principle always applies, as per the Adaptation Fund's E&S Policy.
Gender Equality and Women's Empowerment	x	
Core Labour Rights		Potential OHS issues for contractors within Component 1 – needs to be addressed in the ESMP.
Indigenous Peoples	n/a	
Involuntary Resettlement	x	
Protection of Natural Habitats	x	
Conservation of Biological Diversity	x	
Climate Change	x	
Pollution Prevention and Resource Efficiency		ESMP needs to be developed to include mitigation measures and provisions for adequate waste management.
Public Health	x	
Physical and Cultural Heritage		ESMP needs to include chance finds procedures in case works are being

		performed near or on cultural heritage sites and seek for necessary approvals from authorities if this is the case.
Lands and Soil Conservation	x	

PART III: IMPLEMENTATION ARRANGEMENTS

A. Demonstrate how the project/programme aligns with the Results Framework of the Adaptation Fund

Project Objective(s)[1]	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
Strengthen the skills and research quality in the priority adaptation sectors (Component 1)	Number of climate adaptation skills development programs in priority sectors introduced/improved Number of facilities (e.g. labs, workshops) in education and training institutions (VET/HE) benefiting from infrastructure upgrades for greater climate resilience Number of research grants on climate adaptation projects provided	**Outcome 4:** Increased adaptive capacity within relevant development sector services and infrastructure assets	**Indicator 4.1:** Responsiveness of development sector services to evolving needs from changing and variable climate **Indicator 4.2:** Physical infrastructure improved to withstand climate change and variability-induced stress	1,000,000
Lay the foundations for climate-resilient attitudes and behaviors (Component 2)	Number of renovated/repurposed schools to better withstand climate-related incidents Number of schools repurposed to integrate climate-resilient pre-school spaces Number of schools with launched hands-on learning activities on climate adaptation Number of new/improved capacity-building courses for teachers and school			11,400,000

	principals on climate adaptation			
Facilitate learning and knowledge management (Component 3)	Number of participants in the new/expanded capacity-building courses for national authorities	**Outcome 2:** Capacity of staff to respond to, and mitigate impacts of, climate-related events from targeted institutions increased	**Indicator 2.1:** Capacity of staff to respond to, and mitigate impacts of, climate-related events from targeted institutions increased	111,521
Project Outcome(s)	**Project Outcome Indicator(s)**	**Fund Output**	**Fund Output Indicator**	**Grant Amount (USD)**
Outcome 1: Strengthened climate-resilient human capital and knowledge systems in priority adaptation sectors	Number of learners enrolled in improved/expanded training in the priority adaptation sectors Number of students benefiting from improved facilities (e.g. labs, workshops) in education and training institutions (VET/HE) Number of students accessing research grants in the priority adaptation sectors	**Output 4:** Vulnerable development sector services and infrastructure assets strengthened in response to climate change impacts, including variability	**Indicator 4.1.1.** No. and type of development sector services modified to respond to new conditions resulting from climate variability and change (by sector and scale) **Indicator 4.1.2.** No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by sector and scale)	1,000,000
Outcome 2: Foundations for climate-resilient attitudes and behaviors established	Number of students benefiting from improved climate-resilient school infrastructure Number of children benefiting from repurposed climate-resilient pre-school spaces Number of students participating in hands-on learning activities on climate adaptation Number of teachers and school principals participating in capacity-building on climate			11,400,000

	adaptation			
Outcome 3: Enhanced institutional learning and capacity for effective project implementation and replication	Number of recipients of the lessons learned handbook at the concluding conference	***Output 3.2:*** Strengthened capacity of national and subnational stakeholders and entities to capture and disseminate knowledge and learning	**Indicator 3.2.2** No. of tools and guidelines developed (thematic, sectoral, institutional) and shared with relevant stakeholders	111,521

[1] The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology but the overall principle should still apply

PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. **Record of endorsement on behalf of the government**[2] *Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:*

Dr. Zoran Dabetic, *Secretary of State,* *NDA for the* *Adaptation Fund,* *Ministry of Ecology,* *Sustainable* *Development and* *Northern Region* *Development*	Date*: March 13, 2026*

B. **Implementing Entity certification** *Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide*

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans (……list here…..) and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy and the Gender Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.

also the project/programme contact person's name, telephone number and email address

[6.] Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

Name & Signature  *Zhihong Zhang* Implementing Entity Coordinator	
Date: *May 20, 2026*	Tel. and email: +12022501530; zzhang2@worldbank.org
Project Contact Person: Bojana Naceva	
Tel. And Email: bnaceva@worldbank.org	

Montenegro
Ministry of Ecology, Sustainable Development and
Northern Region Development

Address: Cetinjski put bb,
81000 Podgorica,
Montenegro

ADAPTATION FUND

Reference number: 022.011/26-1079/1
Podgorica, 13 March 2026

The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for "Skills for climate-resilient futures" Project

In my capacity as designated authority for the Adaptation Fund in Montenegro, I confirm that the above national project proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Montenegro.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the World Bank and executed by the Ministry of Education, Science and Innovation of Montenegro.

Sincerely,

Dr Zoran Dabetić
Secretary of State
NDA for Adaptation fund
Ministry of Ecology, Sustainable Development and Northern Region Development

ADAPTATION FUND

Revised PFG Submission Form[1] (additions in red)

Project Formulation Grant (PFG)

Submission Date: 20 May 2026

Adaptation Fund Project ID:
Country/ies: Montenegro
Title of Project/Programme: Skills for climate-resilient futures
Type of IE (NIE/RIE/MIE): Multilateral Implementing Entity (MIE)
Implementing Entity: World Bank
Executing Entity/ies: The Project Formulation Grant will be executed by the World Bank.

A. Project Preparation Timeframe

Start date of PFG	Upon concept note approval
Completion date of PFG	Within 10 months since concept note approval

B. Proposed Project Preparation Activities ($)

List of Proposed Project Preparation Activities	Output of the PFG Activities	US$ Amount	Budget note[2]
Develop the full project proposal	Full project proposal	55,000 USD	Consultant assignment(s) to support the elaboration of the full project proposal, including by undertaking specific analyses (policy/data), identifying relevant indicators, outlining implementation arrangements, supporting the development of the M&E framework, etc.

[1] As presented in AFB/PPRC.33/40 Annex 1.
[2] The proposal should include a detailed budget with budget notes indicating the break- down of costs at the activity level. It should also include a budget on the Implementing Entity management fee use.

Undertake climate vulnerability assessment of the education infrastructure and other technical studies as needed	Climate vulnerability assessment of the education infrastructure and other technical studies	52,000 USD	Outsourced expertise for specialized technical assistance, including a climate vulnerability assessment of the education infrastructure and other technical studies (e.g. follow-up) based on needs
Undertake stakeholder consultations	Stakeholder input into the project proposal	17,000 USD	In-person stakeholder consultations, with tailored sessions in the local language
Undertake travel during full proposal development	Input into the project proposal	13,250 USD	Travel costs required during project preparation, including within-country travel
Total project formulation grant without IE fee		137, 250 USD	Total PFG allocation for proposal preparation excluding the 8.5% IE fee
Implementing Entity (IE) Fee (8.5%)		12,750 USD	IE fee based on 8.5% of total PFG
Total Project Formulation Grant		150,000 USD	Total PFG budget inclusive of IE fee

Please describe below each of the PFG activities and provide justifications for their need and for the amount of funding required: Please see details in Table B above.

For LLA Projects only:

If requesting additional funding for LLA projects to enable devolving decision making to the local level, please specify the activities that would directly serve to enable devolving decision making to the lowest appropriate level and enable local actors to make informed decisions on how adaptation actions are defined, prioritized, designed, and implemented:

Please provide justifications for their need and for the amount of additional funding required:

C. Implementing Entity

This request has been prepared in accordance with the Adaptation Fund Board's procedures and meets the Adaptation Fund's criteria for project identification and formulation

Implementing Entity Coordinator, IE Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address